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IN THE CLAIMS:

Please amended claims 1 and 5-12 as shown in the below LISTING OF CLAIMS:

Claim 1 (currently amended): A process for the continuous production of an aqueous equilibrium peroxycarboxylic acid solution, comprising withdrawing individual components from storage containers or from distribution networks that form the equilibrium peroxycarboxylic acid solution including a lower carboxylic acid, aqueous hydrogen peroxide, water and a mineral acid catalyst, forming continuous streams of the individual components, conveying each component stream by a controlled system including a mass-flow or volume-flow measuring device and a regulating element for regulating the rate of flow, regulating mass flow-rates of the individual components in quantitatively proportional manner with reference to the mass flow-rate of a first component and introducing the regulated mass flow-rates of the individual components into a receiving container, immediately or after individual mass flow-rates have been completely or partially combined together to form a total stream, thereby bringing together the individual components forming the equilibrium peroxycarboxylic acid ~~and~~, and measuring the flow of the total stream formed from the individual streams or measuring the total quantity of the individual or partial streams fed into the container and balancing total flows against the sum of the individual streams, ~~and~~, and allowing the mixture of substances to stand in a container until a desired conversion has been established.

Claim 2 (original): The process according to Claim 1, further comprising measuring flow by a device for mass-flow measurement or a metering pump.

Claim 3 (original): The process according to Claim 1, further comprising drawing the streams off from the storage containers and conveying them via the controlled system by pumps or by available preliminary pressure.

Claim 4 (original): The process according to Claim 2, further comprising drawing the streams off from the storage containers and conveying them via the controlled system by pumps or by available preliminary pressure.

Claim 5 (currently amended): The process according to Claim 1, further comprising keeping regulating conditions constant by adjusting the preliminary pressure of the respective component stream upstream of the respective controlled system ~~is adjusted~~ to a constant value.

Claim 6 (currently amended): The process according to Claim 2, further comprising keeping regulating conditions constant by adjusting the preliminary pressure of the respective component stream upstream of the respective controlled system ~~is adjusted~~ to a constant value.

Claim 7 (currently amended): The process according to Claim 3, further comprising keeping regulating conditions constant by adjusting the preliminary pressure of the respective component stream upstream of the respective controlled system ~~is adjusted~~ to a constant value.

Claim 8 (currently amended): The process according to Claim 4, further comprising keeping regulating conditions constant by adjusting the preliminary pressure of the respective component stream upstream of the respective controlled system ~~is adjusted~~ to a constant value.

Claim 9 (currently amended): The process according to Claim 1, further comprising conducting quantitatively proportional component streams together in succession and homogenizing partial streams that are formed or total stream that is formed with ~~of~~ mixing elements.

Claim 10 (currently amended): The process according to Claim 2, further comprising conducting quantitatively proportional component streams together in succession and homogenizing partial streams that are formed or total stream that is formed with ~~of~~ mixing elements.

Claim 11 (currently amended): The process according to Claim 3, further comprising conducting quantitatively proportional component streams together in succession and homogenizing partial streams that are formed or total stream that is formed with ~~of~~ mixing elements.

Claim 12 (currently amended): The process according to Claim 4, further comprising conducting quantitatively proportional component streams together in succession and homogenizing partial streams that are formed or total stream that is formed with ~~of~~ mixing elements.

Claim 13 (original): The process according to Claim 1, further comprising measuring rate of flow of the total stream that has formed or the total quantity of the individual streams or partial streams introduced into the container or of the total stream and equalizing with the sum of the individual streams.

Claim 14 (original): The process according to Claim 2, further comprising measuring rate of flow of the total stream that has formed or the total quantity of the individual streams or partial streams introduced into the container or of the total stream and equalizing with the sum of the individual streams.

Claim 15 (original): The process according to Claim 3, further comprising measuring rate of flow of the total stream that has formed or the total quantity of the individual streams or partial streams introduced into the container or of the total stream and equalizing with the sum of the individual streams.

Claim 16 (original): The process according to Claim 4, further comprising measuring rate of flow of the total stream that has formed or the total quantity of the individual streams or partial streams introduced into the container or of the total stream and equalizing with the sum of the individual streams.

Claim 17 (original): The process according to Claim 1, further comprising producing an aqueous equilibrium solution of peroxycarboxylic acid from the components comprising lower carboxylic acid, aqueous hydrogen peroxide, water and mineral-acid catalyst, whereby the component streams of carboxylic acid, water, mineral acid, or a partial stream containing carboxylic acid, water and mineral acid, and aqueous hydrogen peroxide are conveyed into the receiving container simultaneously in quantitatively proportional ratio or, in the case where the individual component streams have previously been conducted together, adding aqueous hydrogen peroxide by way of final component and bringing about the establishment of equilibrium by allowing the mixture to stand.

Claim 18 (original): The process according to Claim 2, further comprising producing an aqueous equilibrium solution of peroxycarboxylic acid from the components comprising lower carboxylic acid, aqueous hydrogen peroxide, water and mineral-acid catalyst, whereby the component streams of carboxylic acid, water, mineral acid, or a partial stream containing carboxylic acid, water and mineral acid, and aqueous hydrogen peroxide are conveyed into the receiving container simultaneously in quantitatively proportional ratio or, in the case where the individual component streams have previously been conducted together, adding aqueous hydrogen peroxide by way of final component and bringing about the establishment of equilibrium by allowing the mixture to stand.

Claim 19 (original): The process according to Claim 3, further comprising producing an aqueous equilibrium solution of peroxycarboxylic acid from the components comprising lower carboxylic acid, aqueous hydrogen peroxide, water and mineral-acid catalyst, whereby the component streams of carboxylic acid, water, mineral acid, or a partial stream containing carboxylic acid, water and mineral acid, and aqueous hydrogen peroxide are conveyed into the receiving container simultaneously in quantitatively proportional ratio or, in the case where the individual component streams have previously been conducted together, adding aqueous hydrogen peroxide by way of final component and bringing about the establishment of equilibrium by allowing the mixture to stand.

Claim 20 (original): The process according to Claim 4, further comprising producing an aqueous equilibrium solution of peroxycarboxylic acid from the components comprising lower carboxylic acid, aqueous hydrogen peroxide, water and mineral-acid catalyst, whereby the component streams of carboxylic acid, water, mineral acid, or a partial stream containing carboxylic acid, water and mineral acid, and aqueous hydrogen peroxide are conveyed into the receiving container simultaneously in quantitatively proportional ratio or, in the case where the individual component streams have previously been conducted together, adding aqueous hydrogen peroxide by way of final component and bringing about the establishment of equilibrium by allowing the mixture to stand.

Claims 21-26 (cancelled)

Claim 27 (previously added): The process according to Claim 1, wherein the lower carboxylic acid is acetic acid.